	Application No.	Applicant(s)
Office Action Summary	10/541,399	KIM, SANG-HYEON
	Examiner	Art Unit
	RANDY SCOTT	2453

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 January 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

 4a) Of the above claim(s) *17-38* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 39-54* is/are rejected.

7)☒ Claim(s) *1,6,7,39,47 and 48* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a)☒ All   b)☐ Some *   c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date *7/1/05 & 6/21/07*.

4) ☒ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. *4/3/09* .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is responsive to the application filed 7/1/2005

Specification

2.   The disclosure is objected to because of the following informalities:

Line 8 of page 1 should recite "through **a** plurality of distributed nodes".

Line 12 of page 1 should recite --most content data-- instead of –most contents data—.

Line 15 of page 1 should recite –through **the** streaming method—instead of "through streaming

method".

Line 21 of page 1 should recite --connection state is unstable—instead of "connection state is in

stable".

Line 17 of page 2 should recite –in **the** file transmission system—instead of "in file transmission

system".

Line 5 of page 3 should recite –in **the** next block—instead of "in next block".

Line 15 of page 3 should recite –selected from **the** group—instead of "selected from group".

Line 9 of page 4 should be concluded with a period.

Line 4 of page 5 should recite --data from **the** system-- instead of "data from system".

Pages 1-31 should recite the term –content servers instead of "contents servers".

Line 15 of page 9 should recite "a downloaded file" or "downloaded files"

        Appropriate correction is required.

Objections

3.   Line 8 of claim 1 should recite –included in the next block-- instead of "included in next

block"

Line 7 of claims 1 and 39 should recite --redistributing said sub blocks--.

Line 2 of claims 6 and 47 should recite --redistributing said sub blocks--.

Line 3 of claims 6 and 47 should recite --said sub block download--.

Line 2 of claims 7 and 48 should recite --redistributing said sub blocks--.

Line 3 of claims 7 and 48 should recite --said sub block download--.

Election/Restriction

4.   Restriction to one of the following invention is required under 35 U.S.C. 121:

      I.   Claims 1-16 are drawn to a method for downloading data by

streaming and establishing connections, classified in class 709,

subclass 231.

      II.   Claims 17-28 are drawn to a communication agent program for

providing content information, classified in class 709, subclass 202.

      III.   Claims 29-32 are drawn to a data request module, classified in class

710, subclass 33.

      IV.   Claims 33-38 are drawn to a connection server used to receive

content information, classified in class 725, subclass 4.

5. Inventions I, II, III, and IV are related as subcombination disclosed as usable together in a

single combination. The subcombinations are distinct from each other if they are shown to

be separately usable. The following case instants:

> Inventions II, III, and IV perform separate utility than the limitations provided in
>
> group 1 because group I is drawn to a method for allowing a client to download
>
> data by streaming and establishing connection to a plurality of nodes. Group I
>
> streaming data by distributing data blocks using sub blocks until the data is
>
> transferred or 'streamed' in real time, groups II, III, and IV would be considered
>
> separate inventions because each groups independent claim is drawn to processing
>
> content info or handling state information, Rather than providing a main function
>
> of providing a connection and downloading data.
>
> Because these inventions are distinct for the reasons given above and have
>
> acquired a separate status in the art as shown by their different classification,
>
> restriction for examination purposes as indicated is proper. During a telephone
>
> conversation with Attorney Chen Lee (attorney docket # 08015.0022, on April 2nd, 2009
>
> an election was made without traverse to prosecute the invention of group I,
>
> claims 1-16. Affirmation of this election must be made by applicants in replying
>
> to this Office action. Claims 17-38 are withdrawn from further consideration by
>
> the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Claims 17-38 are orally withdrawn by election of restriction on the phone on 4/2/2009.

7. Claims 17-38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as

being drawn to a nonelected group of invention, there being no allowable generic or linking

claim. Election was made **without** traverse.

Claim Rejections – 35 USC 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office Action:

> A person shall be granted a patent unless-
>
> ```
> (e) the invention was described in (1) an application for patent, published
> under section 122(b), by another filed in the United States before the
> invention by the applicant for patent or (2) a patent granted on an
> application for patent by another filed in the United States before the
> invention by the applicant for patent, except that an international
> application filed under the treaty defined in section 351(a) shall have the
> effects for purposes of this subsection of an application filed in the
> United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English
> language.
> ```

9.   Claims 1-7, 9, 14-16, 39-42, 46-48, 50, and 52-54 are rejected under 35 USC 102(e) as

being anticipated by Padmanabham et al (US 2004/0143672).

Regarding claims 1 and 39, Padmanabham et al discloses:

(a) establishing connections with a plurality of nodes (see sec [0008], lines 6-10, which

teaches connecting nodes); (b) sending a request for sub blocks of streaming data to the plurality

of nodes where connection is established to download the sub blocks (see sec [0008], lines 2-14,

which teaches sending requests for the streaming media and receiving the sub-streams); (c)

monitoring download state of the established connections (see page 7, col. 2, lines 29-34, which discloses monitoring packet loss of each sub stream); and (d) redistributing sub blocks to be downloaded from some of the nodes where connection is established according to the monitoring result; wherein, the step (b) to step (d) are repeated for downloading sub blocks included in next block when all sub blocks included in a block are downloaded (see sec [0029], lines 12-18, which discloses redistributing streaming data for the downloaded sub streams).

Regarding claims 2 and 40, Padmanabham et al discloses:

Determining sub blocks to download from each of the nodes where connection is established (see sec [0006], lines 5-9, which teaches that the streaming content are selected and sent to clients in the form of encoded sub streams).

Regarding claims 3 and 46, Padmanabham et al discloses:

Monitoring if there exists a connection where sub block download is completed (see page 7, col. 2, lines 2-5, which teaches contacting the contacting the peer clients in response to establish connection).

Regarding claims 4 and 41, Padmanabham et al discloses:

The method wherein the sub blocks to be downloaded from each of the nodes are determined by calculating connection state valuation index (see sec [0042], lines 2-5, "measuring the network latency").

Regarding claims 5 and 42, Padmanabham et al discloses:

The method wherein the connection state valuation index is calculated using information selected from group consisting of round-trip time with each of the nodes and average download speed from each of the nodes (see sec [0042], lines 1-5)

Regarding claims 6 and 47, Padmanabham et al discloses:

The step of redistributing sub blocks between a connection where sub block download is completed and some of the connections where sub block download is not completed when a connection where sub block download is completed exists (see sec [0029], lines 12-18, "redistribution").

Regarding claims 7 and 48, Padmanabham et al discloses:

The method wherein the step (d) comprises the step of redistributing sub blocks between a connection where sub block download is completed and a connection of which download rate is the lowest among connections where sub block download is not completed (see sec [0029], lines 12-18, "redistribution" and sec [0033], lines 2-6, which discloses that the packet transfer rate is only one packet per frame group).

Regarding claims 9 and 50, Padmanabham et al discloses:

The step of storing information of nodes with which the connection establishment failed in a black list queue (see sec [0027], lines 11-16, which teaches memory for nodes in the MTH tree that fail).

Regarding claims 14 and 52, Padmanabham et al discloses:

The step of sending a request for sub blocks to corresponding nodes by the redistribution result to download redistributed sub blocks after redistribution of sub blocks (see sec [0029], lines 12-18, "redistribution").

Regarding claims 15 and 53, Padmanabham et al discloses:

The step of downloading streaming data by connecting to a singular server if sub block

download from the plurality of the nodes fails (see sec [0027], lines 5-8, which teaches that a

second sub-stream will be provided in the event of failure in relation to the first sub stream).

Regarding claims 16 and 54, Padmanabham et al discloses:

Monitoring state information of nodes which are not transmitting data among nodes

where connection is established (see sec [0040], lines 5-9); redistributing sub blocks to be

downloaded between some of the nodes which are transmitting data and some of the nodes

which are not transmitting data (see sec [0029], lines 12-17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> (a) A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the
> differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

10.   Claims 8 and 49 are rejected under 35 USC 103 (a) as being unpatentable over

Padmanabham et al (US 2004/0143672) in view of Jenkins (US 6,028,608), further in view of

Arye (US 2002/0002708).

With respect to claims 8 and 49, Padmanabham et al (US 2004/0143672) discloses

redistributing the remaining sub blocks between the connection where sub block download is

completed and the connection of which the download rate is the lowest according to rate of the

download speed if sub block redistribution is necessary (see sec [0029], lines 12-18,

"redistribution" and sec [0033], lines 2-6, which discloses that the packet transfer rate is only one

packet per frame group); and determining the number of remaining sub blocks to download in

the connection of which the download rate is the lowest (see sec [0033], lines 2-6).

However, Padmanabham et al does not specifically teach determining if redistribution of

sub blocks is necessary; and determining download speed of the connection where the sub block

download is completed and the connection of which the download rate is the lowest.

Jenkins discloses the general concepts of: determining if redistribution of sub blocks is

necessary (see col. 43, lines 22-25, which discloses the step of determining if redistribution is

necessary).

It would have been obvious to one of ordinary skill in the art to combine Padmanabham

et al with the general concepts of scaling the costs in the sets; and removing items having

duplicate scaled costs to reduce sizes of the sets, as illustrated by Jenkins in order to sufficiently

implement a image transmission system for streaming info.

However, Padmanabham et al and Jenkins do not specifically teach determining download speed of the connection where the sub block download is completed and the connection of which the download rate is the lowest.

Arye discloses the general concepts of: determining download speed of the connection where the sub block download is completed and the connection of which the download rate is the lowest (see sec [0057], which teaches the lowest and highest bit rate for sub streams transmitted).

It would have been obvious to one of ordinary skill in the art to combine Padmanabham et al and Jenkins with the general concepts of scaling the costs in the sets; and removing items having duplicate scaled costs to reduce sizes of the sets, as illustrated by Arye in order to effectively maintain a streaming data embodiment.

11.   Claims 10-12 and 43-45 are rejected under 35 USC 103 (a) as being unpatentable over Padmanabham et al (US 2004/0143672) in view of Griffiths (US 6,014,698).

With respect to claims 10 and 43, Padmanabham et al (US 2004/0143672) discloses redistributing the remaining sub blocks between the connection where sub block download is completed and the connection of which the download rate is the lowest according to rate of the download speed if sub block redistribution is necessary (see sec [0029], lines 12-18, "redistribution" and sec [0033], lines 2-6, which discloses that the packet transfer rate is only one packet per frame group); and determining the number of remaining sub blocks to download in the connection of which the download rate is the lowest (see sec [0033], lines 2-6).

However, Padmanabham et al does not specifically teach the steps of wherein the sub blocks to be downloaded from each of the nodes are determined using the node state information.

Griffith discloses the general concept of: wherein the sub blocks to be downloaded from each of the nodes are determined using the node state information (see col. 21, lines 35-45, which discloses that the address information of the terminal that is used to select the server that can download the information to the terminal in the shortest period of time).

It would have been obvious to one of ordinary skill in the art to combine Padmanabham et al with the general concept of wherein the sub blocks to be downloaded from each of the nodes are determined using the node state information, as illustrated by Griffiths in order to consistently regulate a video streaming mechanism.

With respect to claims 11 and 45, Padmanabham et al (US 2004/0143672) discloses redistributing the remaining sub blocks between the connection where sub block download is completed and the connection of which the download rate is the lowest according to rate of the download speed if sub block redistribution is necessary (see sec [0029], lines 12-18, "redistribution" and sec [0033], lines 2-6, which discloses that the packet transfer rate is only one packet per frame group); and determining the number of remaining sub blocks to download in the connection of which the download rate is the lowest (see sec [0033], lines 2-6).

However, Padmanabham et al does not specifically teach wherein sub blocks to be downloaded from each of the nodes are determined by state information of nodes in initial state of download, after determination of download speed from each of the nodes, sub blocks to be downloaded from each of the nodes are determined using connection state valuation index which is calculated using information selected from group consisting of round-trip time with each of the nodes and average download speed from each of the nodes.

Griffith discloses the general concepts of: wherein sub blocks to be downloaded from each of the nodes are determined by state information of nodes in initial state of download, after determination of download speed from each of the nodes, sub blocks to be downloaded from each of the nodes are determined using connection state valuation index which is calculated using information selected from group consisting of round-trip time with each of the nodes and average download speed from each of the nodes (see col. 21, lines 50-55, "round trip times").

It would have been obvious to one of ordinary skill in the art to combine Padmanabham et al with the general concepts of wherein sub blocks to be downloaded from each of the nodes are determined by state information of nodes in initial state of download, after determination of download speed from each of the nodes, sub blocks to be downloaded from each of the nodes are determined using connection state valuation index which is calculated using information selected from group consisting of round-trip time with each of the nodes and average download speed from each of the nodes, as illustrated by Griffiths in order to consistently regulate a video streaming mechanism.

With respect to claims 12 and 44, Padmanabham et al (US 2004/0143672) discloses redistributing the remaining sub blocks between the connection where sub block download is completed and the connection of which the download rate is the lowest according to rate of the download speed if sub block redistribution is necessary (see sec [0029], lines 12-18, "redistribution" and sec [0033], lines 2-6, which discloses that the packet transfer rate is only one packet per frame group); and determining the number of remaining sub blocks to download in the connection of which the download rate is the lowest (see sec [0033], lines 2-6).

However, Padmanabham et al does not specifically teach wherein the connection

establishment with the plurality of nodes is performed using state information of the nodes.

Griffith discloses the general concept of: wherein the connection establishment with the

plurality of nodes is performed using state information of the nodes (see col. 21, lines 35-40,

which teaches that connections are established by reviewing terminal address information).

It would have been obvious to one of ordinary skill in the art to combine Padmanabham

et al with the general concept of wherein the connection establishment with the plurality of nodes

is performed using state information of the nodes, as illustrated by Griffiths in order to

consistently regulate a video streaming mechanism.

12.   Claims 13 and 51 are rejected under 35 USC 103 (a) as being unpatentable over

Padmanabham et al (US 2004/0143672) in view of Liva et al (US 2002/0136203).

With respect to claims 13 and 51, Padmanabham et al (US 2004/0143672) discloses

redistributing the remaining sub blocks between the connection where sub block download is

completed and the connection of which the download rate is the lowest according to rate of the

download speed if sub block redistribution is necessary (see sec [0029], lines 12-18,

"redistribution" and sec [0033], lines 2-6, which discloses that the packet transfer rate is only one

packet per frame group); and determining the number of remaining sub blocks to download in

the connection of which the download rate is the lowest (see sec [0033], lines 2-6).

However, Padmanabham et al does not specifically teach the step of determining

download error using checksum value of downloaded sub blocks.

Liva et al discloses the general concept of: determining download error using checksum

value of downloaded sub blocks (see sec [0087], lines 5-7, "sub-block" & "checksum").

It would have been obvious to one of ordinary skill in the art to combine Padmanabham

et al with the general concept of determining download error using checksum value of

downloaded sub blocks, as illustrated by Liva et al in order to successfully control packet

transmission in a network.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Randy A. Scott whose telephone number is (571) 272-3797. The

examiner can normally be reached on Monday-Thursday 7:30 am-5:00 pm, second Fridays 7:30

am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RANDY SCOTT/

Examiner, Art Unit 2453

20090401

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Primary Examiner, Art Unit 2457